

STRUCTURE AND METHOD FOR HYPER-ABRUPT JUNCTION VARACTORS

Abstract

A method and device providing a HA junction varactor which may be fabricated with a reduced variation in C-V tuning curve from one varactor to the next. The process produces a varactor with an active region formed substantially by doping an Si substrate with various dopants at various energy levels. Accordingly, unit-to-unit device variation is reduced because etching, growing, and deposition processes to make the active portion of the varactor are reduced or eliminated. The resulting HA junction has a more uniform thickness, and a more uniform doping profile.